



## MONTANA DEPARTMENT OF TRANSPORTATION JOB PROFILE AND EVALUATION

### SECTION I - Identification

Working Title: Computer Network Analyst  
Job Code Number: 151716

Department Transportation  
Division & Bureau Information Service  
Division  
Applications Bureau

Job Code Title: Computer Network Administrator  
Applications

Section & Unit Business  
Section

Pay Band: 6  
Position Number : 44007, 81004, 82005, 25013, and 81116  
Work Address 2701 Prospect Ave  
Helena, MT 59620

Phone

☐ FLSA Exempt ☒ FLSA Non-Exempt

Profile done by: Kimberly Worthy/Kristi Antosh Work Phone 444-7489

### Work Unit Mission Statement or Functional Description

The Information Services Division (ISD) provides a full range of services for the Montana Department of Transportation (MDT). The bureaus within the division plan and set policy, and coordinate, design, install and maintain the department's information technology infrastructure. This includes network management, server systems administration, desk top and mobile computer systems administration, database administration, applications development and maintenance, integrated systems development, Internet and Intranet web page developments, data security & disaster recovery services, geographic information systems (GIS), global positioning systems (GPS), roadway information collection, user support, training, imaging services, duplication services, IT research and development, budget development and monitoring, procurement administration, contract administration, and project management. The division also includes the MDT Duplicating Services Section.

### Describe the Job's Overall Purpose:

This position will support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system in support of the Department of Transportation's day-to-day operations. Working together with other State entities, this position will install cabling; configure routers and switches to accomplish needed improvements in network connectivity and throughput. The incumbent will maintain and administer computing environments including hardware, systems software and associated configurations as well as applications software used in support of one's monitoring tasks. The position will be involved in diagnosing hardware and software problems, replacing defective components when necessary and is involved in the planning, coordination and implementation of security measures to protect data, software and hardware. The incumbent designs, configures and tests computer hardware, networking software and operating system software.

## **SECTION II - Major Duties or Responsibilities      % of Time**

### **A.      Maintain Operating Systems (60%)**

Maintains integrity of the operating system environment and performs system software updates and upgrades including planning and scheduling, testing and coordination. Use MDT's productivity tools to effectively manage assignments. The incumbent will have demonstrated ability to read and understand technical materials. He or she will work independently with limited supervision, and will have strong time management skills.

- 1) Performs server configuration, installation, and setup including Web Servers and Application Servers. Provide server maintenance and support on a single OS, using provided detailed documentation.
- 2) Supports senior staff members troubleshooting efforts by installation of operation system utilities and through completion of server hardware configurations. Provides assistance in problem resolution efforts.
- 3) Performs routine system monitoring and performance tasks on a regular basis, ensuring that the system has achieved and maintains optimum performance levels. Diagnoses hardware and software problems, and replaces defective components.
- 4) Supports media management through internal methods and procedures. Develops and/or supports data/media recoverability schedule, and performs data backup, archival, and recovery operations.
- 5) Develops understanding of security requirements for development personnel, and works with senior staff to identify and implement security requirements.
- 6) Participates in investigation, planning, documentations, implementation, and maintenance of unique MDT computer hardware (i.e. cameras, bridge deck sprayers, etc.).
- 7) Assists higher level staff in the testing and analysis of all elements of the network facilities and for implementation of changes to the network, with guidance. Includes power, communications machinery, software, lines, modems, and terminals.
- 8) Able to work independently on small projects.

## **B. Document Processes and Outputs (25%)**

Follows MDT's documentation standards to develop and maintain documentation and to provide status reports and updates using MDT's productivity tools. Maintain operations documentation for individual restorability and Disaster Recovery. Develop and provide security reporting necessary for senior technicians.

- 1) Develops and gains approval of documentation for duties as assigned.
- 2) Maintains schedule of system backups and database archive operations to ensure data/media recoverability processes are clearly defined and documented.
- 3) Uses trouble-shooting skills and analytical thinking to assist in investigation, planning, documentation, implementation, and maintenance of Disaster Recovery plans.
- 4) Assists in development and maintenance of hardware documentation.
- 5) Provides status reports/regular updates to supervisor and project lead.

## **C. Staff Support (15%)**

Maintains active interactions with ISD staff, consultants, and vendors. Provide next level support and mentoring for user support staff. Maintain shared peripherals (printers, scanners).

- 1) Independently performs routine security access procedures.
- 2) Effectively interacts with consultants, vendors, and ISD staff on support issues.
- 3) Uses deductive reasoning skills to diagnosis and resolve user data communication problems.
- 4) Assists in procurement of ISD hardware and software through active committee involvement. Obtains quotes, prepares ITPRs and obtains approvals, etc. as requested by purchasing committee.
- 5) Assists with training activities.

1. The most complicated aspect of this position is?

A network administrator needs to be detail oriented and have strong communication skills. The position requires using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems. The incumbent will be required to identify, develop, and evaluate options and implement solutions. He or she will conduct tests and inspections of products, services, or processes to evaluate quality or performance.

2. What guidelines, manuals or written procedures support this position?

Laws, regulations, guidelines, manuals or procedures available to the incumbent include MCA, ARM, Information Services Division policies and operational procedures, system manuals and documentation, Montana Operations Manual, SABHRS manuals, MDT ISD and state information technology standards, department operating procedures, and technical system references. Primary guides for the work are found in standards of the profession and current best practices in information technology. Available references include various software and system manuals and technical documentation.

3. Does this position supervise others? ☐ Yes ☒ No

Number directly supervised: .

Complexity level of the positions supervised .

Position Number(s) of those supervised .

4. This position is responsible for:

- |  |                                     |                                      |                                    |
|--|-------------------------------------|--------------------------------------|------------------------------------|
| <input type="checkbox"/> Hiring  | <input type="checkbox"/> Firing     | <input type="checkbox"/> Supervision | <input type="checkbox"/> Pay Level |
| <input type="checkbox"/> Performance Management                                      | <input type="checkbox"/> Promotions | <input type="checkbox"/> Discipline  |                                    |
| <input checked="" type="checkbox"/> Other: Provides limited work direction to others |                                     |                                      |                                    |

5. Attach an Organizational Chart.

**SECTION III - Minimum Qualifications** - List minimum requirements for the **first day** of work.

**Critical knowledge and skills required for this position:**

**Knowledge**

Knowledge or experience with computer operating systems (both server and PC) specific to MDT (currently VMS, Linux, Windows 2003); network administration principles and processes, knowledge of Cisco equipment, VPN, Wireless or other technology, Oracle and/or SQL database basics or security understanding (AD, DB and/or file); High-level understanding of Disaster Recovery and Business Resumption planning contrasted with High Availability; familiarity with domain structures and user authentication.

## **Skills**

Reading Comprehension, Active Listening, Writing, Speaking, Logical and Analytical Thinking, Deductive Reasoning, Active Learning, Service Orientation, Problem Solving, Operations Analysis, Troubleshooting, Quality Control, SDLC, MS Office (Word, Excel, Outlook), keyboarding

### **Behaviors required to perform these duties?**

#### **Plan, Organize, Gather Information and Conduct Research**

Define an end result. Set or follow a course of action to achieve it. Anticipate potential obstacles and monitor progress. Organize tasks into component parts in a rational, methodical way. Collect and use relevant information, data, and opinions.

#### **Identify Problems**

Assess situations in a logical and methodical way based on facts. Seek root causes. Recognize patterns, connections, themes, and issues. See implications and consequences of a situation or information.

#### **Take a Reasonable, Logical Approach to Solving Problems**

Develop feasible solutions based on logical assumptions and factual observation that reflect consideration for resources, constraints, organizational values and goals.

#### **Provide Analytical Thinking and Deductive Reasoning**

Uses logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems, work tasks and strategies; Able to demonstrate that conclusions reached utilizes previously known facts such that the individual can quickly eliminate possible causes (and solutions).

#### **Personal Accountability and Ownership**

Accepts individual responsibilities for all actions taken; Reliable- honors commitments; is self-motivated yet is able to take direction from supervisor or senior team members.

#### **Prioritizing, Multi-tasking, Balancing Multiple Projects**

Recognize or establish the relative importance of multiple issues, tasks, and opportunities to maximize the productivity of the organization.

#### **Quality, Accuracy, Attention to Detail**

Achieve excellent work results by attending to details. Demonstrate an appropriate level of precision to complete projects successfully and to execute job responsibilities in a timely manner.

#### **Reading Comprehension**

Demonstrates ability to take information provided in manuals and convert it into identifiable, actionable steps. Successfully reviews white papers, technology updates and provides synopsis for management decisions.

## **Listening**

Give full attention to and make a conscious effort to hear other's ideas, concerns, questions, and issues with interest, empathy, and objectivity. Paraphrase and ask questions to ensure understanding of the message when required.

## **Responsiveness, Follow up**

Assumes responsibility for and delivers on commitments to the customer. Initiates contact to clarify issues or problems in a timely manner; Keeps the customer up-to-date about work effort.

## **Speaking Effectively**

Express and present thoughts and ideas clearly, succinctly, and in an understandable manner individually and in a group. Adjust language, delivery, or terminology to meet the needs of the audience. This competency includes any type of verbal communication such as giving presentations, providing training, giving testimony, speaking in person or by phone.

## **Writing Effectively**

Express and present information and ideas in writing which is clear, succinct, and understandable. Adjust the language, writing style, and terminology used to meet the need and level of understanding of the reader. Utilize knowledge of the structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar. (This competency includes any type of formal or informal written communication: i.e. letters, reports, studies, presentations, articles, rules, policies, procedures, and manuals.)

## **Education:**

Check the one box indicating **minimum** education requirements for this position for a new employee the **first day** of work:

- |   |  |
|---|--|
| <input type="checkbox"/> No education required                | <input type="checkbox"/> Related AAS/2-years college/vocational training |
| <input type="checkbox"/> High school diploma or equivalent    | <input checked="" type="checkbox"/> Related Bachelor's Degree            |
| <input type="checkbox"/> 1-year related college/voc. training | <input type="checkbox"/> Related Master's degree                         |

Required/Acceptable degrees: Bachelor's Degree in Computer Science or a closely related field such as Information Systems Design or Computer Programming.

Other education, training, certification, or licensing desired (specify): Working knowledge of and or experience with computer operating systems for both server and personal computer; such as Linux, Unix, VMS and/or Windows; working knowledge of the Oracle RDBMS and its related tools specifically; database structure at a more generic level, or a similar working knowledge of network equipment, tools and techniques or general network administration. Certifications such as MCSA, CCNA or CCDA, LPIC or RHCT are desirable.

## **Experience:**

Check the one box indicating **minimum** work-related experience requirements for this position for a new employee the **first day** of work:

- |   |  |
|---|--|
| <input type="checkbox"/> No prior experience required | <input type="checkbox"/> 3 to 4 years    |
| <input checked="" type="checkbox"/> 1 to 2 years      | <input type="checkbox"/> 5 or more years |

Other specific experience (optional):

**Alternative Qualifications:**

This agency will accept alternative methods of obtaining qualifications. ☒ Yes ☐ No

- 1) College courses completed will be evaluated on a case by case basis to potentially reduce the years of experience required. Thirty (30) completed and passed semester credits (or the equivalent in quarter credits) from an accredited college or university may be considered as one year of college.
- 2) In replacement of the related Bachelor's Degree requirement, MDT would accept:
  - an AS Degree in Computer Science or Computer Information Systems and a minimum of 4 years of general technical data center operations or systems management experience **OR**
  - no degree and 6 or more years of general technical data center operations or systems management experience.

Other education, training, certification, or licensing desired (specify): Working knowledge of and or experience with computer operating systems for both server and personal computer; such as Linux, Unix, VMS and/or Windows; working knowledge of the Oracle RDBMS and its related tools specifically; database structure at a more generic level, or a similar working knowledge of network equipment, tools and techniques or general network administration. Certifications such as MCSA, CCNA or CCDA, LPIC or RHCT are desirable.

## SECTION V – Signatures

Signature indicates this statement is accurate and complete.

### ***Employee:***

Name: Title

Signature Date

### ***Immediate Supervisor:***

Tom O'Sullivan Systems/Operations Team Supervisor  
Name: Title

Signature Date

### ***Division/District Administrator:***

Michael G. Bousliman Division Administrator  
Name: Title

Signature Date



***Department Designee:***

Name: Title

Signature Date

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***Recruitment Review:*** My signature below attests to my review of and determination that the minimum qualifications (education and experience) listed in this profile meet the established recruitment standards of MDT.

Name: Human Resource Specialist (Helena/District)  
Title

Signature Date

